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(71) Applicant *(for all designated States except US)*: DOCOMO COMMUNICATIONS LABORATORIES USA, INC. [US/US]; 181 Metro Drive, Suite 300, San Jose, CA 95110 (US).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: GENTRY, Craig [US/US]; 230 Houghton St., Mountain View, CA 94041 (US).

(74) Agent: HORIE, Tadashi; Brinks Hofer Gilson & Lione, P.O. Box 10087, Chicago, IL 60610 (US).

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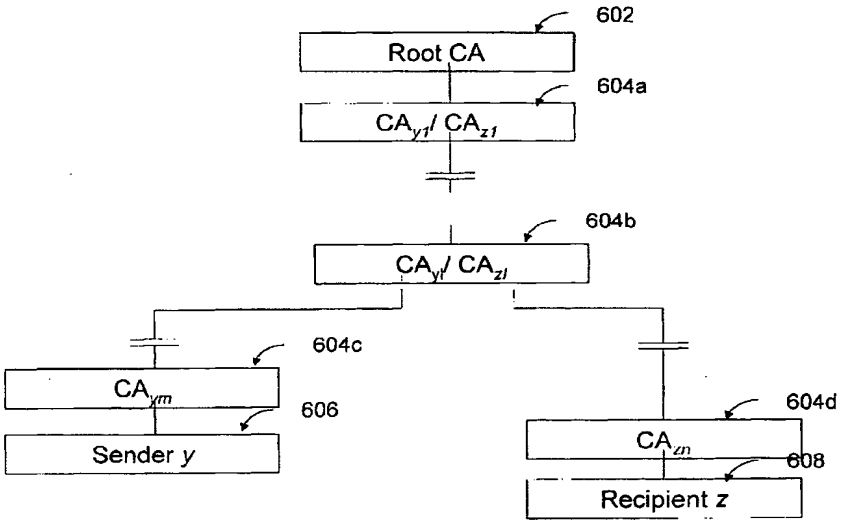
(54) Title: CERTIFICATE-BASED ENCRYPTION AND PUBLIC KEY INFRASTRUCTURE



(57) Abstract: The present invention provides methods for sending a digital message from a sender (606) to a recipient (608) in a public-key based cryptosystem comprising an authorizer (606). The authorizer can be a single entity (606) or comprise a hierarchical or distributed entity (602, 604a-604b). The present invention allows communication of messages by an efficient protocol, not involving key status queries or key escrow, where a message recipient (608) can decrypt a message from a message sender (606) only if the recipient (608) possesses up-to-date authority from the authorizer. The invention allows such communication in a system comprising a large number (e.g. millions) of users.

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INTERNATIONAL SEARCH REPORT

International application No.
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A. CLASSIFICATION OF SUBJECT MATTER
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According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

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U.S. : 713/156, 157

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EAST

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5,867,578 A (BRICKELL et al) 02 February 1999 (02.02.1999), abstract; fig.1 and 3; col.3, lines 44-67; col.4-29.	1-8, 16, 18-25, 27, 28 and 68-71
Y	US 5,774,552 A (GRIMMER) 30 June 1998 (30.06.1998), abstract; fig.1-5 and 13; col.2, lines 43-67; col.3-7 and col.8, lines 1-33.	1-8, 16, 18-25, 27, 28 and 68-71

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Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703)305-3230	Authorized officer Gilberto Barron Telephone No. 703-305-3900